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SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM EPA CONTRACT 68-W5-0019

February 16, 1999

Eric Wilson U.S. Environmental Protection Agency Removal Action Branch 2890 Woodbridge Avenue Edison, NJ 08837

EPA CONTRACT NO: 68-W5-0019

TDD NO: 02-98-08-0072

DOCUMENT CONTROL NO: START-02-F-03287

SUBJECT:

TIER I RESIDENTIAL SAMPLING AND ANALYSIS SUMMARY REPORT,

ADDENDUM NO. 1 - CORNELL DUBILIER ELECTRONICS

Dear Mr. Wilson:

Enclosed please find Addendum No. 1 to the Tier I Residential Sampling and Analysis Summary Report for the Cornell Dubilier Electronics site located in South Plainfield, Middlesex County, New Jersey. If you have any questions or comments, please call me at (732) 225-6116.

Very truly yours,

ROY F. WESTON, INC.

Michael Mahnkopf

1 Mahre

Project Manager

Enclosure

cc: TDD File



Eric Wilson

On-Scene Coordinator

TIER I RESIDENTIAL SAMPLING AND ANALYSIS SUMMARY REPORT, ADDENDUM NO. 1

CORNELL DUBILIER ELECTRONICS SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

Prepared by

Superfund Technical Assessment and Response Team
Roy F. Weston, Inc.
Federal Programs Division
Edison, New Jersey 08837

Prepared for

U.S. Environmental Protection Agency Region II - Removal Action Branch Edison, New Jersey 08837

DCN #: START-02-F-03287 TDD #: 02-98-08-0072 EPA Contract No.: 68-W5-0019

Approved by:	
START	
Michael Mahnkopf Project Manager	Date: 2/16/99
START Denny Lette for TON Thomas O'Neill Group Leader	Date: 2/16/99
EPA	
·	Date:

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1.0 BACKGROUND

The Cornell-Dubilier Site is located at 333 Hamilton Boulevard in South Plainfield, Middlesex County, New Jersey (Attachment A, Figure 1). The site is approximately 25 acres in size. Facing Hamilton Boulevard are several buildings currently occupied by approximately 15 businesses. The rear of the property consists of an open field and adjoining wetlands. The facility is currently known as Hamilton Industrial Park.

The site is bordered by Hamilton Boulevard to the northwest, Spicer Avenue to the southwest, a wetlands area to the southeast, the Bound Brook and Conrail railroad tracks to the northeast. The Bound Brook traverses the southeast section of the site.

Cornell-Dubilier operated at the site from 1936 to 1962, manufacturing electronic components, including capacitors. It is alleged that during its operation, Cornell-Dubilier disposed of polychlorinated biphenyl (PCB) contaminated materials and other hazardous substances at the site.

Previous investigations have identified PCBs and heavy metals at the Cornell-Dubilier site and in the Bound Brook downstream of the site.

PCBs were detected in interior dust and soil samples collected from residential properties located adjacent to the site in October and November 1997. EPA risk assessors and the Agency for Toxic Substances and Disease Registry (ATSDR) reviewed the data and determined that PCB levels found at several properties along Spicer Avenue were a health concern for residents.

2.0 OBJECTIVE

The objective of this sampling program was to collect the data necessary to determine if health concerns exist for the residents of an additional property (designated as Property FF) located near the Site. Approximately thirty (30) surface (0-2") soil samples were collected from this additional property located on Spicer Avenue.

3.0 SAMPLING DESIGN AND APPROACH

In accordance with the April 27, 1998 Residential/Neighborhood Soil Sampling QA/QC Work Plan (DCN: START-02-F-1753), approximately thirty (30) surface (0-2") soil samples were collected from the residential property discussed above. A systematic sampling scheme was employed for this sampling event. Grid spacing was selected at the property to yield approximately thirty (30) samples. The starting point of the sampling grid was chosen randomly using a random numbers table.

4.0 SAMPLING & ANALYSIS - NOVEMBER 14, 1998

Soil sampling activities were performed on November 14, 1998 by the following personnel:

- 1. Michael Mahnkopf START, Region II
- 2. Kathleen Romaine START, Region II

All soil samples were collected utilizing dedicated plastic scoops and/or spatulas. All soil samples were analyzed by Ecology & Environment, Inc., 4493 Walden Avenue, Lancaster, NY, 14086, (716) 685-8080. For additional information, see the December 3, 1998 Trip Report included as Appendix 2 and project logbook # START-02-209.

4.1 Property FF

Pursuant to the procedures discussed above in Section 3.0, a grid pattern of 24' X 24' was established for this property. Thirty-one (31) surface (0-2") soil samples (CDFF001 through CDFF031) were collected and analyzed for total PCBs. Utilizing the random sampling chart, sample CDFF001 was located 5' southwest and 16' northwest from the apparent eastern property corner. Soil sample locations are shown on Figure 2.

QA/QC samples included the collection of two (2) field duplicate samples (CDFF032 - dupl. of CDFF001; CDFF033 dupl. of CDFF011) and two (2) matrix spike/matrix spike duplicate samples (CDFF001 MS/MSD; CDFF011 MS/MSD). Samples CDFF032, CDFF033, CDFF001 MS/MSD and CDFF011 MS/MSD were analyzed for total PCBs.

Analytical results indicate soil samples CDFF001 through CDFF033 exhibited total PCB concentrations which ranged from 0.34 parts per million (ppm) (CDFF001) to 6.2 J ppm (estimated) (CDFF014). Arochlor-1254 concentrations ranged from 0.31 ppm (CDFF032) to 6.0 ppm (CDFF014). Arochlor-1260 concentrations ranged from non-detected (CDFF001 through CDFF005, CDFF008) to 0.56 ppm (CDFF006).

Analytical results are summarized in Table 1 and the laboratory Form I's and data validation results are included as Appendix 3.

5.0 SITE SPECIFIC QUALITY ASSURANCE/QUALITY CONTROL PLAN

The objective of this QA/QC plan is to provide analytical results which are legally defensible in a court of law. The QA/QC plan incorporated procedures for field sampling, chain of custody, laboratory analyses, and reporting to assure generation of sound analytical results. Sampling procedures were conducted in accordance with USEPA protocols.

5.1 Sampling Equipment and Methods

Samples were collected at the locations and depths as described in this report. Procedural changes dictated by field conditions were fully documented in the field notes and trip report.

Equipment utilized for this project were dedicated plastic scoops and spatulas. Where necessary and prior to sample collection, non-dedicated stainless steel spackle knives were utilized to remove the top layer of grass at sample locations. The stainless steel spackle knives were decontaminated between sample locations using a detergent (Alconox/water) solution, followed by a tap water rinse.

All soil samples were transferred immediately after collection into sample bottles selected by parameter as listed below. Sample bottles used for this project were prepared in accordance with USEPA criteria for polychlorinated biphenyls (PCBs).

The type of sample container required for the Cornell Dubilier Electronics residential soil investigation were as follows:

a. Polychlorinated Biphenyls - 8 oz. glass bottle with teflon closure.

All soil samples were packed on ice immediately following collection.

All samples were labeled with the following information:

- a. sample number;
- b. date and time of collection;
- c. site name;
- d. sample collector's initials;
- e. analyses required.

Accurate field notes were maintained which included the information listed above. Additional information included, but was not limited to:

- a. sample location sketch;
- b. sample method;
- c. general comments, including any modification from the sample plan.

5.2 Chain of Custody

Chain of custody was maintained for all samples. Chain of custody originated with the collection of the samples and was maintained until the samples were relinquished to the laboratory. The chain of custody form detailed the following information:

- a. sample identification number;
- b. sample collection date and time;
- c. sample matrix;
- d. expected contaminant concentration (low, medium, high);
- e. sample type (grab or composite);

- f. sample preservation;
- g. analytical parameters;
- h. name(s) and signatures(s) of sampler(s);
- i. signatures(s) of individual(s) with control over samples.

5.3 Quality Assurance/Quality Control Samples

The matrix for all samples included in this investigation was soil. QA/QC samples included the collection of one (1) field duplicate and one (1) matrix spike/matrix spike duplicate sample for each matrix (soil) per sampling date at a ratio of one (1) per twenty (20) samples. Extra volume was submitted to allow the laboratory to perform matrix spike sample analysis. This analysis provides information about the effect of sample matrix digestion and measurement methodology. Field duplicate samples provide an indication of sample homogeneity and were not identified to the laboratory. In addition, one (1) rinsate blank per sampling date was also submitted for PCB analysis. The rinsate blank serves as an indicator of the effectiveness of the equipment decontamination procedures.

5.4 Sample QA/QC Data

A CLP format deliverable QA/QC package was provided for all samples submitted for analysis.

6.0 DATA VALIDATION

Data was evaluated according to criteria contained in the Removal Program Data Validation Procedures that accompany OSWER Directive number 9360.4-1 and in accordance with Region II guidelines using the following data validation SOP: SOP HW-13, "USEPA Region II Data Validation SOP for Statement of Work OLCO 2.1, Rev.2". Laboratory analytical results were assessed by the data reviewer for compliance with required precision, accuracy, completeness, representativeness, and sensitivity.

Data validation was performed by START, Region II in accordance with Level QA-2 criteria. Data validation results indicate that the analytical results are acceptable with comments. For specific comments, see the Data Validation Results included as Appendix 3.

PROJECT: Cornell-Dubilier

SDG# 4337

SOIL: Low Concentration

Sample #/Concentration (ug/Kg)

Sample Date	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98
Sample ID	CDFF001	CDFF002	CDFF003	CDFF004	CDFF005	CDFF006	CDFF007	CDFF008	CDFF009	CDFF010
Lab ID	18905	18906	18907	18908	18909	18910	18911	18912	18913	18914
% Moisture	17%	18%	19%	18%	14%	13%	10%	19%	31%	15%
Dilution Factor	10	10_	10	10	10	10	10	10	20	10
Aroclor-1016	240 U	240 U	250 U	240 U	230 U	230 U	220 U	250 U	580 U	240 U
Aroclor-1221	480 U	490 U	490 U	490 U	460 U	460 U	440 U	490 U	1200 U	470 U
Aroclor-1232	240 U	240 U	250 U	240 U	230 U	230 U	220 U	250 U	580 U	240 U
Aroclor-1242	240 U	240 U	250 U	240 U	230 U	230 U	220 U	250 U	580 U	240 U
Aroclor-1248	240 U	240 U	250 U	240 U	230 U	230 U	220 U	250 U	580 U	240 U
Aroclor-1254	340	890	720	1500	600	1100	990	1000	2800	650
Aroclor-1260	240 U	240 U	250 U	240 U	230 U	560	180 J	250 U	440 J	130 J
Total PCB (mg/kg)	0.34	0.89	0.72	1.5	0.60	1.7	1.2 J	1,0	3.2 J	0.78 J

U - Non-detected compound.

B - Compound detected in the associated Method Blank.

J - Estimated value.

JN - Presumptive evidence of a compound at an estimated value.

R - Rejected compound.

PROJECT: Cornell-Dubilier

SDG# 4337

SOIL: Low Concentration

Sample #/Concentration (ug/Kg)

Sample Date	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98
Sample ID	CDFF011	CDFF012	CDFF013	CDFF014	CDFF015	CDFF016	CDFF017	CDFF018	CDFFO19	CDFF020
Lab ID	18915	18916	18917	18918	18919	18920	18921	18922	18923	18924
% Moisture	15%	16%	14%	14%	21%	15%	14%	13%	14%	15%
Dilution Factor	10	20	10	20	10	10	20	10	10	10
Aroclor-1016	240 U	480 U	230 U	460 U	250 U	240 U	460 U	230 U	230 U	230 U
Aroclor-1221	470 U	950 U	460 U	930 U	510 U	470 U	920 U	460 U	460 U	460 U
Aroclor-1232	240 U	480 U	230 U	460 U	250 U	240 U	460 U	230 U	230 U	230 ป
Aroclor-1242	240 U	480 U	230 U	460 U	250 U	240 U	460 U	230 U	230 U	230 U
Aroclor-1248	240 U	480 U	230 U	460 U	250 U	240 U	460 U	230 U	230 U	230 U
Aroclor-1254	790	3900	1100	6000	1600	920	2100	560	720	340
Aroclor-1260	260	260 J	230	240 J	240 J	200 J	380 J	140 J	260	140 J
Total PCB (mg/kg)	1.1	4.2 J	1.3	6.2 J	1.8 J	1.1 J	2,5 J	0.70 J	0,98	0.48 J

U - Non-detected compound.

B - Compound detected in the associated Method Blank.

J - Estimated value.

JN - Presumptive evidence of a compound at an estimated value.

R - Rejected compound.

PROJECT: Cornell-Dubilier

SDG# 4337

SOIL: Low Concentration

Sample #/Concentration (ug/Kg)

Sample #/Concern	Tation Luga	191				·				
Sample Date	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98
Sample ID	CDFF021	CDFF022	CDFF023	CDFF024	CDFF025	CDFF026	CDFF027	CDFF028	CDFF029	CDFF030
Lab ID	18925	18926	18927	18928	18929	18930	18931	18932	18933	18934
% Moisture	19%	23%	12%	16%	12%	12%	11%	14%	15%	16%
Dilution Factor	10	10	10	10	10	10	10	10	10	10
Aroclor-1016	250 U	260 U	230 U	240 U	230 U	230 U	220 U	230 U	240 U	240 U
Aroclor-1221	490 U	520 U	450 U	480 U	450 U	450 U	450 U	460 U	470 U	480 U
Aroclor-1232	250 U	260 U	230 U	240 U	230 U	230 U	220 U	230 U	240 U	240 U
Aroclor-1242	250 U	260 U	230 U	240 U	230 U	230 U	220 U	230 U	240 U	240 U
Aroclor-1248	250 U	260 U	230 U	240 U	230 U	230 U	220 U	230 U	240 U	240 U
Aroclor-1254	890	350	350	830	560	730	1000	670	610	550
Aroclor-1260	220 J	140 J	110 J	160 J	130 J	210 J	240	150 J	140 J	120 J
Total PCB (mg/kg)	1.1 J	0.49 J	0.46 J	0.99 J	0,69 J	0.94 J	1.2	0,82 J	0.75 J	0.67 J

U - Non-detected compound.

B - Compound detected in the associated Method Blank.

J - Estimated value.

JN - Presumptive evidence of a compound at an estimated value.

R - Rejected compound.

PROJECT: Cornell-Dubilier

SDG# 4337

SOIL: Low Concentration

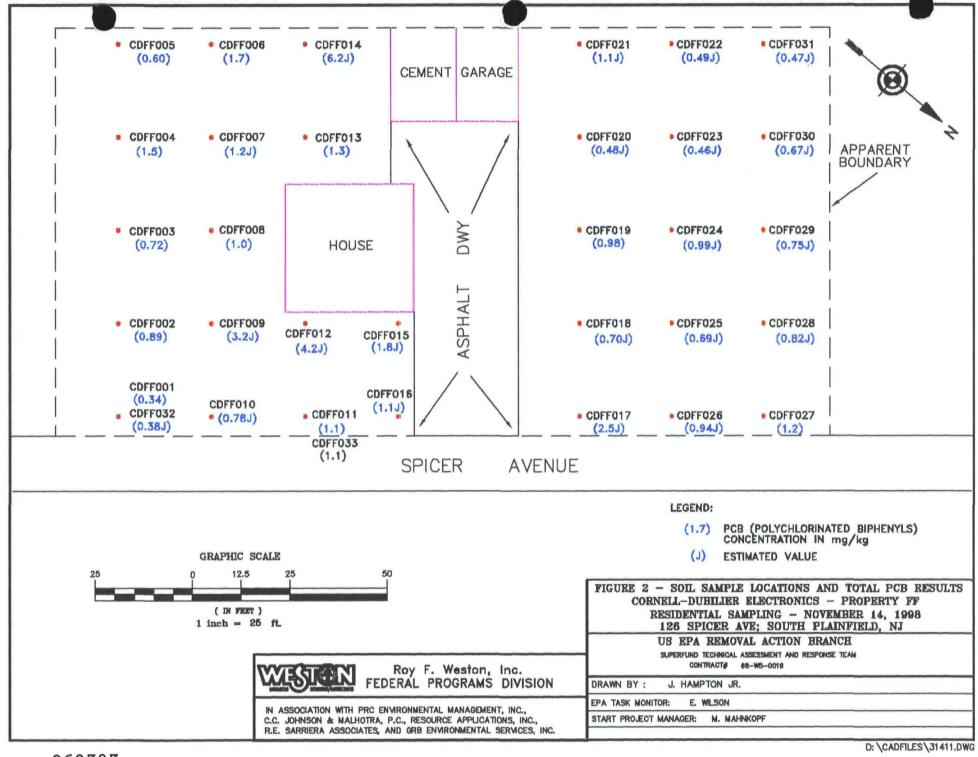
Sample #/Concentration (ug/Kg)

Sample #/Concent	tration (ug/	119/		 	 		
Sample Date	11/14/98	11/14/98	11/14/98				
Sample ID	CDFF031	CDFF032	CDFF033				
Lab ID	18935	18936	18937				
% Moisture	18%	17%	15%				
Dilution Factor	10	10	10				
Aroclor-1016	240 U	240 U	240 U				
Aroclor-1221	490 U	480 U	470 U				
Aroclor-1232	240 U	240 U	240 U				· · · · · · · · · · · · · · · · · · ·
Aroclor-1242	240 U	240 U	240 U				
Aroclor-1248	240 U	240 U	240 U				
Aroclor-1254	360	310	870			_	
Aroclor-1260	110 J	66 J	270				
Total PCB (mg/kg)	0.47 J	0.38 J	1.1				

- U Non-detected compound.
- B Compound detected in the associated Method Blank.
- J Estimated value.
- JN Presumptive evidence of a compound at an estimated value.
- R Rejected compound.

APPENDIX 1 SITE MAPS/FIGURES





APPENDIX 2 TRIP REPORT - DECEMBER 3, 1998



Roy F. Weston, Inc.
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SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM EPA CONTRACT 68-W5-0019

December 3, 1998

Mr. Eric Wilson U.S. Environmental Protection Agency Removal Action Branch 2890 Woodbridge Avenue Edison, New Jersey 08837

TDD NO: 02-98-08-0072

DCN NO: START-02-F-03238

SUBJECT: RESIDENTIAL SOIL SAMPLING TRIP REPORT *

CORNELL-DUBILIER ELECTRONICS, SOUTH PLAINFIELD, NEW JERSEY

Dear Mr. Wilson:

Enclosed please find one (1) copy of the Sampling Trip Report for the residential soil sampling episode conducted at the above referenced site on November 14, 1998. If you have any questions or comments, please contact me at (732) 225-6116.

Sincerely,

ROY F. WESTON, INC.

Mahrton

Michael Mahnkopf

Project Manager

Enclosure

SAMPLING TRIP REPORT

SITE NAME:

Cornell-Dubilier Electronics

DCN #: START-02-F-03238

TDD #: 02-98-08-0072

SAMPLING DATE: November 14, 1998

EPA I.D. NO.:

GZ

Site Location: 1.

Former Cornell-Dubilier Electronics

333 Hamilton Boulevard, South Plainfield, New Jersey

(See Figure 1). Specifically, surface (0-2") soil samples were collected from the residential property located at 126 Spicer Ave.,

South Plainfield, New Jersey.

2.

Sample Descriptions: Thirty-five (35) surface soil samples (including field duplicates and MS/MSD's) and one (1) field rinsate blank were collected and

submitted for total polychlorinated biphenyl (PCB) analysis. See-

Table 1 for additional information.

3. Laboratories Receiving Samples:

Analysis

Name and Address of Laboratory

Total PCBs

Ecology & Environment, Inc.

4493 Walden Ave. Lancaster, NY 14086

(716) 685-8080

4. Sample Dispatch Data:

> On November 14, 1998, a total of thirty-six (36) samples were shipped by Region II START personnel, via Federal Express (airbill No.4811726846), to Ecology & Environment, Inc.

5. On-Site Personnel:

Name

Representing

Duties on Site

Michael Mahnkopf

Kathleen Romaine

Region II START

Region II START

Project Manager Sample Technician

6. Additional Comments:

On November 14, 1998, a total of thirty-five (35) soil samples were collected from thirty-one (31) sample locations. The thirty-five (35) samples included thirty-one (31) surface soil samples, two (2) field duplicates and two (2) matrix spike/matrix spike duplicate samples. All samples were collected with dedicated plastic scoops/spatulas. Additionally, one (1) field rinsate blank was generated and submitted for laboratory analysis.

Where necessary and prior to sample collection, non-dedicated stainless steel spackle knives were utilized to remove the top layer of grass at sample locations. The stainless steel spackle knives were decontaminated between sample locations using a detergent (Alconox)/water solution, followed by a tap water rinse.

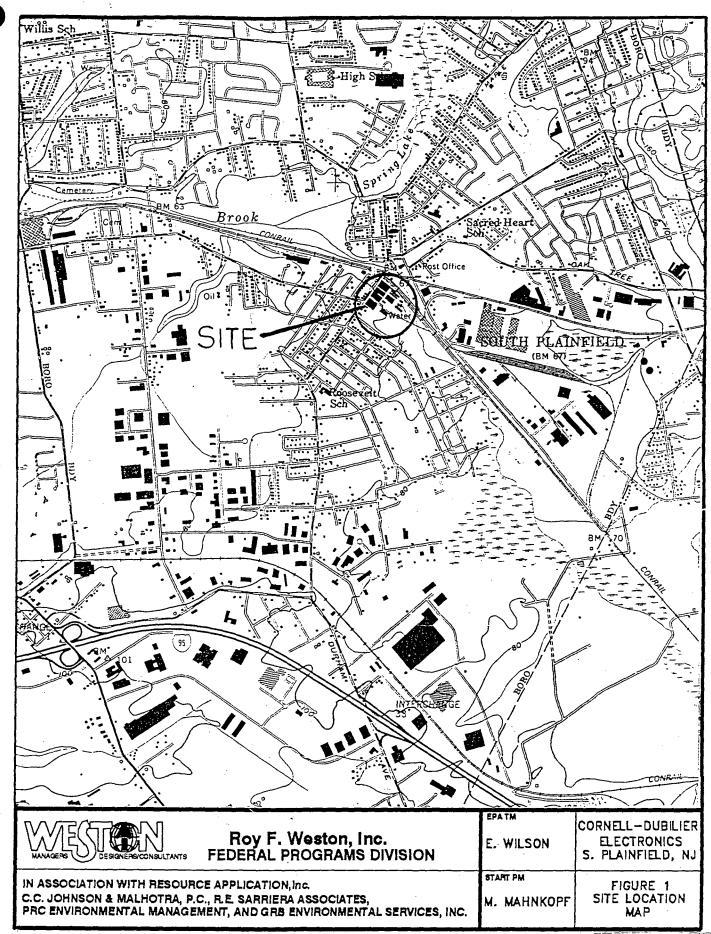
Enclosed as Attachment A are copies of the chain of custody records.

7. Report prepared by: Michael Mahnkopf $\mathcal{M}.\mathcal{M}$.

Date: December 2, 1998

8. Report reviewed by: Dennis Foerter

Date: December 3, 1998



CORNELL-DUBILIER ELECTRONICS SOUTH PLAINFIELD, NJ RESIDENTIAL SOIL SAMPLING & ANALYSIS

SAMPLE ID	MATRIX	DEPTH	DATE/ TIME	ANALYSIS	LOCATION
CDFF001	Soil	0-2"	11/14/98 1205 hrs.	Total PCB	126 Spicer Ave.
CDFF001 MS/MSD	Soil	0-2"	11/14/98 1205 hrs.	Total PCB	Matrix spike/ Matrix spike dupl
CDFF002	Soil	0-2"	11/14/98 1140 hrs.	Total PCB	126 Spicer Ave.
CDFF003	Söil	0-2"	11/14/98 1146 hrs.	Total PCB	126 Spicer. Ave.
CDFF004	Soil	0-2"	11/14/98 1152 hrs.	Total PCB	126 Spicer Ave.
CDFF005	Soil	0-2"	11/14/98 1158 hrs.	Total PCB	126 Spicer Ave.
CDFF006	Soil	0-2"	11/14/98 1153 hrs.	Total PCB	126 Spicer Ave.
CDFF007	Soil	0-2"	11/14/98 1150 hrs.	Total PCB	126 Spicer Ave.
CDFF008	Soil	0-2"	11/14/98 1145 hrs.	Total PCB	126 Spicer Ave.
CDFF009	Soil	0-2"	11/14/98 1140 hrs.	Total PCB	126 Spicer Ave.
CDFF010-	Soil	0-2"	11/14/98 1135 hrs.	Total PCB	126 Spicer Ave.
CDFF011	Soil	0-2"	11/14/98 1215 hrs.	Total PCB	126 Spicer Ave.

CORNELL-DUBILIER ELECTRONICS SOUTH PLAINFIELD, NJ RESIDENTIAL SOIL SAMPLING & ANALYSIS

SAMPLE ID	MATRIX	DEPTH	DATE/ TIME	ANALYSIS	LOCATION
CDFF011 MS/MSD	Soil-	0-2"	11/14/98 1215 hrs.	Total PCB	Matrix spike/ Matrix spike dupl
CDFF012	Soil-	0-2"	11/14/98 1210 hrs.	Total PCB	126 Spicer Ave
CDFF013	Soil	0-2"	11/14/98 1200-hrs	Total PCB	126 Spicer Ave
CDFF014	Soil	0-2"	11/14/98 1204 hrs.	Total PCB	126 Spicer Ave
CDFF015	Soil	0-2 ^u	I 1/14/98 1214 hrs.	Total PCB	126 Spicer Ave
CDFF016	Soil	0-2"	11/14/98 1220 hrs	Total PCB	126 Spicer Ave
CDFF017	Soil	0-2"	11/14/98 1226 hrs.	Total PCB	126 Spicer Ave.
CDFF018	Soil	0-2"	11/14/98 1234 hrs.	Total PCB	126 Spicer Ave
CDFF019	Soil	0-2"	11/14/98 1240 hrs.	Total PCB	126 Spicer Ave.
CDFF020	Soil	0-2"	11/14/98 1248 hrs.	Total PCB	126 Spicer Ave
CDFF021	Soil	0-2"	11/14/98 1254 hrs.	Total PCB	126 Spicer Ave.

CORNELL-DUBILIER ELECTRONICS SOUTH PLAINFIELD, NJ RESIDENTIAL SOIL SAMPLING & ANALYSIS

SAMPLE ID	MATRIX	DEPTH	DATE/ TIME	ANALYSIS	LOCATION
CDFF022	Soil	0-2"	11/14/98 1246 hrs.	Total PCB	126 Spicer Ave.
CDFF023	Soil	0-2"	11/14/98 1240 hrs.	Total PCB	126 Spicer Ave
CDFF024	Soil	0-2"	11/14/98 1235 hrs.	Total PCB	126 Spicer Ave.
CDFF025	Soil	0~2"	11/14/98 1230 hrs.	Total PCB	126 Spicer Ave.
CDFF026	Soil	0-2"	11/14/98 1225 hrs.	Total PCB	126 Spicer Ave.
CDFF027	Soil	0-2"	11/14/98 1300 hrs.	Total PCB	126 Spicer Ave.
CDFF028	Soil	0-2"	11/14/98 1305 hrs.	Total PCB	126 Spicer Ave.
CDFF029	Soil	0-2"	11/14/98 1255 hrs.	Total PCB	126 Spicer Ave
CDFF030	Soil	0-2"	11/14/98 1300 hrs.	Total PCB	126 Spicer Ave.
CDFF031	Soil	0-2"	11/14/98 1250 hrs.	Total PCB	126 Spicer Ave
CDFF032	Soil	0-2"	11/14/98 1205 hrs.	Total PCB	Duplicate of CDFF001

CORNELL-DUBILIER ELECTRONICS SOUTH PLAINFIELD, NJ RESIDENTIAL SOIL SAMPLING & ANALYSIS

SAMPLE ID	MATRIX DEPTH		DATE/ TIME	ANALYSIS	LOCATION
CDFF033	Soil	0-2"	11/14/98 1215 hrs.	Total PCB	Duplicate of CDFF011
RB-1	Aqueous		11/14/98 1115 hrs.	Total PCB	Rinsate Blank

ATTACHMENT 1 CHAIN OF CUSTODY RECORDS

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FEDERAL PROGRAMS DIVISION

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FEDERAL PROGRAMS DIVISION

In Association with Resource Applications, Inc., R.E. Serriera Associates, PRC Environmental Management, C.C. Joinson & Malhotra, P.C., and GRB Environmental Services, Inc.

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FEDERAL PROGRAMS DIVISION

APPENDIX 3

ANALYTICAL RESULTS (FORM I's) & DATA VALIDATION RESULTS



Roy F. Weston, Inc.
Federal Programs Division
Suite 201
1090 King Georges Post Road
Edison, New Jersey 08837-3703
908-225-6116 • Fax 908-225-7037

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM EPA CONTRACT 68-W5-0019

START-02-F-03321

TRANSMITTAL MEMO

To:

Eric Wilson, OSC

Response and Prevention Branch, U.S. EPA Region II

From:

David Rosenberg, Data Reviewer

START Region II

Subject:

Cornell Dubilier Site, South Plainfield, New Jersey

Data Validation Assessment

Date:

January 18, 1999

The purpose of this memo is to transmit the following information:

• Data validation results for the following parameters:

TCL - Total PCBs

34 samples

• Matrices and Number of Samples

Soil/Sediment

33 samples

Water

1 sample

Sampling date:

November 14, 1998

The final data assessment narrative and original analytical data package are attached.

cc: START PM

Michael Mahnkopf

START FILE TDD #:

02-98-08-0072

TDD #:

02-98-11-0009

PCS #:

U.S. ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUN	1	<i>;</i>								
DATE:	December 1	15, 1998								
то:	Eric Wilso USEPA Re	•								
FROM:		David Rosenberg START Data Review Team								
SUBJECT:	QA/QC Co	QA/QC Compliance Review Summary								
As requested qual examined and con areas were evalua	npared to EPA	standards for c								
Spe Sur Ma Cal	-	Quality	Blanks DFTPP and BFB Tuning Chromatography Holding Times Compound ID (HSL, TIC) wing conclusions are attached so that the review							
Summary	of Results									
		I _VOA_	· II _BNA_	III PEST/PCB	IV _HERB					
Acceptable as Sub Acceptable with C Unacceptable, Ac Unacceptable	Comments									
Data Reviewed by	y:	Mavid	Krenley	Date	1-15-99					
Approved By:		Justo	Q	Date	: 1/18/99					
Area Code/Phone	No.:	(732) 225	5-6116							

NARRATIVE

CASE No. <u>4337</u>

SITE NAME:	Cornell-Dubilier Site								
	South Plainfield, New Jersey								
Laboratory Name:	Ecology & Environment								
INTRODUCTION:									
The laboratory's portion of this Case consisted of 33 samples collected on November 14, 1998.									
The laboratory reported No problem(s) with the receipt of these samples.									
The laboratory reported a problem with the analyses of samples for PCBs (See letter from Tony Bogolin, Project Mgr) Many of the samples contained relatively large amounts of Aroclor 1254 which shares common PCB peaks with Aroclor 1260. The lab found it very difficult to quantitate the amount of Aroclor 1260 since they could not isolate the peaks. At our request, the									
lab requantitated the chromatographic data in order to determine the amount of Aroclor 1260 where possible.									
have been assessed,	mmented on the criteria specified under each fraction heading. All criteria but no discussion is given where the evaluator has determined that criteria ormed or require no comment. Details relevant to these comments are given ed.								

Evaluation by Fraction:

III. Pesticides/PCB -

Y Holding Times Y Calibration Linearity

Y Instrument Performance Y Blank

Y Surrogate Recovery Y Retention Time Window

Y MS/MSD Y Analytical Sequence

Y Compound ID Y RT Check for TCX and DCB

Y Chromatography

Comments:

1. Refer to Data Assessment Narrative.

CLP DATA ASSESSMENT

		SOLSOWILI VI		
Fu	nctional Guidelines for E	valuating Organi	c Analysis	
CASE #433 LAB:Ecol	37 logy & Environment	SDG # SITE:Corne	ll-Dubilier	
The current Functions	d Guidelines for evaluating o	rganic data have be	en applied.	
'N" (presumptive evide	cceptable except those analyte nce for the presence of the m for the presence of the mater	aterial), "U" (non-d	etects), "R" (unus	able), or "JN"
unusable. In other winformation as to wheth because they cannot be compound concentrat	noted by all data users. Firefords, due to significant QC ner the compound is present of e relied upon, even as a last ion, even if it has passed all idence in data but any value	problems, the anar not. "R" values sl resort. The second QC tests, is guarant	lysis is invalid and nould not appear of I fact to keep in m teed to be accura	d provides no on data tables aind is that no
Analytical data qualif Characteristic or Land	fied as "JN" or "R" may not d Ban Regulations.	be used to demons	strate compliance	with Toxicity
Reviewer's Signature:	Wurd Risenber	Date: _	1/5/19/29	
Verified By:			_//19	

CLP DATA ASSESSMENT

On 14 November 1998, START personnel collected 33 soil samples at the Cornell-Dubilier Site in South Plainfield, New Jersey, including two field duplicates and extra volume for two MS/MSDs, and one rinse blank. The samples were shipped by overnight express to Ecology & Environment Labs and submitted for total PCB analysis by SW-846 methods.

Client identification (ID) and laboratory ID numbers:

Client ID No.	Laboratory ID No.	Matrix
CDFF001, MS/MSD	18905	SOIL
CDFF002	18906	SOIL
CDFF003	18907	SOIL
CDFF004	18908	SOIL
CDFF005	18909	SOIL
CDFF006	18910	SOIL
CDFF007	18911	SOIL
CDFF008	18912	SOIL
CDFF009	18913	SOIL
CDFF010	18914	SOIL
CDFF011, MS/MSD	18915	SOIL
CDFF012	18916	SOIL
CDFF013	18917	SOIL
CDFF014	18918	SOIL
CDFF015	18919	SOIL
CDFF016	18920	SOIL
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CDFF024	18928	SOIL
CDFF025	18929	SOIL
CDFF026	18930	SOIL
CDFF027	18931	SOIL
CDFF028	18932	SOIL
CDFF029	18933	SOIL
CDFF030	18934	SOIL
CDFF031	18935	SOIL
CDFF032	18936	SOIL- duplicate of CDFF001
CDFF033	18937	SOIL- duplicate of CDFF011
RB-1	18938	WATER- rinsate blank

CLP DATA ASSESSMENT

1. HOLDING TIMES:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following analytes in the samples shown were qualified because of holding time:

TCL Data

<u>Pest/PCBs</u> - The following data were qualified as estimated "J" or rejected "R" due to exceeding holding time criteria:

Sample ID Matrix

Date Sampled Date Extracted Qualifier

Compounds

No problems were found.

Note: Continuous extraction of water samples must be started within seven (7) days of the date of collection. Soil/Sediment/Solid samples must be extracted within seven (7) days of collection. Extracts must be analyzed within forty (40) days of extraction.

2. BLANK CONTAMINATION:

Quality Assurance (QA) blanks [i.e., method, trip, field or rinse blanks] are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. If the concentration of the analyte is less than 5 times the blank contaminant level (10 times for common contaminants), the analytes are qualified as non-detects, "U". The following analytes in the samples shown were qualified with "U" for these reasons:

A) Method Blank Contamination

<u>Pest/PCBs</u> - The following compounds were qualified as non-detected "U" in the associated samples due to method blank contamination:

Compound		Associated Samples
Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242	No problems were found. No problems were found. No problems were found. No problems were found.	
Aroclor-1248 Aroclor-1254 Aroclor-1260	No problems were found. No problems were found. No problems were found.	

B) Field or Rinse Blank Contamination ("water blanks" or "distilled water blanks" are validated like any other sample)

<u>Pest/PCBs</u> - The following compounds were qualified as non-detected "U" in the associated samples due to rinse blank contamination:

Compound

Associated Samples

No problems were found.

4. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

Response Factor:

The response factor measures the instrument's response to specific chemical compounds. The response

factor for the VOA/BNA Target Compound List (TCL) must be ≥ 0.05 in both the initial and continuing calibrations. A value ≤ 0.05 indicates a serious detection and quantitation problem (poor sensitivity). If the mean RRF of the initial calibration or the continuing calibration has a response factor < 0.05 for any analyte, those analytes detected in environmental samples will be qualified as estimated "J". All non-detects for those compounds will be rejected "R". The following analytes in the samples shown were qualified because of response factor:

Initial Calibration

No problems were found.

5. CALIBRATION:

PERCENT RELATIVE STANDARD DEVIATION (%RSD) AND PERCENT DIFFERENCE (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be < 30% and %D must be < 25%. A value outside of these QC limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J"; and non-detects are flagged "UJ". If %RSD and/or %D grossly exceed QC criteria, non-detect data may be qualified "R".

For the PESTICIDE/PCB fraction, if %RSD exceeds 20% for all analytes except for the 2 surrogates (which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the samples shown were qualified for %RSD and %D:

Initial Calibration

<u>Pest/PCBs</u> - The following compounds were qualified as estimated "J" or rejected "R" in the associated samples because the linearity criteria or the percent relative standard deviation (%RSD) of the Initial Calibration is > 20% for either one or both GC columns:

Compound

Percent Recovery Qualifier

Associated

Sample(s)

No problems were found.

Continuing Calibration:

<u>Pest/PCBs</u> - The Percent Difference (%D) for PEM compound amounts in the continuing calibration verification analyses and/or the %D amounts in the Individual Standard Mixes of the continuing calibration verification analyses are ≥ 25% for either one or both GC columns. The following

compounds were either qualified as estimated "J" or rejected "R" due to exceeding Continuing Calibration QC criteria:

Compound

RPD

Oualifier

Associated Sample(s)

No problems were found.

<u>Pest/PCBs</u> - The following compounds were qualified as estimated "J" in the associated samples because the Continuing Calibration %D is between 25-90% for these compounds on the primary GC column:

Compound

Associated Samples

No problems were found.

6. SURROGATES/SYSTEM MONITORING COMPOUNDS (SMC):

All samples are spiked with surrogate/SMC compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate/SMC concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below. The following analytes for the samples shown were qualified because of surrogate/SMC recovery:

<u>Pest/PCBs</u> - The following compounds were either qualified as estimated "J" or rejected "R" due to Tetrachloro-m-xylene (TCX) and Decachlorobiphenyl (DCB) surrogate recoveries are both outside specified advisory QC limits (30-150%):

Surrogate

Recovery

Qualifier Compounds

Sample(s)

No problems were found.

Note: Data were qualified because recoveries for both surrogates are outside specified QC limits and above 10%, or either surrogate has a percent recovery below 10%.

7. INTERNAL STANDARDS PERFORMANCE:

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor

¹ Positive values only were qualified as estimated "J" in the associated samples.

of 2 (-50% to 100%) from the associated continuing calibration standard. If the area count is outside the -50% to 100% range of the associated standard, then all of the positive results for compounds quantitated using that IS are qualified as estimated "J", and all non-detects as "UJ". If the IS area is > 25% (a severe loss of sensitivity) then all non-detects associated with that IS are qualified as "R" and all positive results for compounds quantitated using that IS are qualified as estimated "J".

The retention time of the internal standard must not vary more than \pm 30 seconds from the associated continuing calibration standard. If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgement to determine either partial or total rejection of the data for that sample fraction. The following analytes in the samples shown were qualified because of internal standard performance:

8. COMPOUND IDENTIFICATION:

B) PESTICIDE FRACTION:

The retention time of the reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10 ng/ml in the final sample extract. The percent difference (%D) of the positive results obtained on the two GC columns would be $\leq 25\%$. The following analytes in the samples shown were qualified because of compound identification:

<u>Pest/PCBs</u> - The following detected compounds were qualified due to a percent difference (%D) between the primary and confirmation columns > 25%:

Compound

%D

Oualifier

Sample(s)

No problems were found.

Note: During the initial calibration sequence, absolute retention times are determined for all single response pesticides, the surrogates, and at least three major peaks of each multi-component analyte. Windows are centered around the mean absolute retention time for the analyte established during the initial calibration. Analytes are identified when peaks are observed in the retention time window for the compound on both GC columns. The quant reports listed many potential pesticide compounds for consideration. Comparison of the sample retention times to the retention time windows established during the initial calibration revealed that no additional pesticide compounds were detected in the associated samples. In addition, no shifts for surrogate compound retention times were noted to occur that might require consideration of compounds outside respective retention time windows.

9. MATRIX SPIKE/SPIKE DUPLICATE (MS/MSD):

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for some additional qualification of the data. The following analytes, for the samples shown, were qualified because of MS/MSD:

<u>Pest/PCBs</u> - The following sample data were either qualified as estimated "J" or rejected "R" due to exceeding duplicate spike recovery QC criteria:

Original Sample

Spike Recovery

Qualifier

Compound(s)

No problems were found.

10. OTHER QC DATA OUT OF SPECIFICATION:

No problems were found.

<u>Pest/PCBs</u> - The following compounds were qualified as estimated "J" in the associated aqueous and/or soil/sediment field duplicate samples because the Relative Percent Difference (RPD) between the sample and field duplicate sample is > 50% for aqueous samples, or > 100% for soil/sediment samples:

Compound

Matrix

% RPD

Associated Field Duplicate Samples

No problems were found.

The following soil/sediment/solid sample data (other than TCLP data) were either qualified as estimated "J" (% moisture between 50-90%) or rejected "R" (% moisture > 90%) because the sample contains more than 90% water:

Fraction

Percent Moisture

Qualifier # Compounds Sample(s)

Pest/PCBs

No problems were found.

11. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT:

Due to professional judgement, the following compounds were not transferred from the indicated dilution sample analyses to the undiluted sample analyses because the reported values of these compounds are either diluted out in the associated dilution sample analyses or are qualified as non-detected "U" due to blank contamination QC criteria:

Fraction

Compound

Dilution Sample(s)

Dilution Factor

No problems were found.

Due to professional judgement, the following positive data were rejected "R" due to possible carryover from a previous sample analysis that contained the compound(s) at high concentration(s):

Fraction

Sample Compound

Sample Compound

Previous Sample

Concentration

Compound Concentration

No problems were found.

12. CONTRACT PROBLEMS/NON-COMPLIANCE:

The initial laboratory report did not quantify Aroclor 1260 because there were large amounts of Aroclor 1254 whose peaks overlapped with many of the Aroclor 1260 peaks. The data was reworked to show whatever Aroclor 1260 could be detected and quantitated from peaks unique to Aroclor 1260 and new Form Is were prepared. The data package now includes both reports.

PROJECT: Cornell-Dubilier

SDG# 4337

SOIL: Low Concentration

Sample #/Concentration (ug/Kg)

ountpie mooncen	aution (ug.	1.97						<u></u>		
Sample Date	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98
Sample ID	CDFF001	CDFF002	CDFF003	CDFF004	CDFF005	CDFF006	CDFF007	CDFF008	CDFF009	CDFF010
Lab ID	18905	18906	18907	18908	18909	18910	18911	18912	18913	18914
% Moisture	17%	18%	19%	18%	14%	13%	10%	19%	31%	15%
Dilution Factor	10	10	10	10	10	10	10	10	20	10
Aroclor-1016	240 U	240 U	250 U	240 U	230 U	230 U	220 U	250 U	580 U	240 U
Aroclor-1221	480 U	490 U	490 U	490 U	460 U	460 U	440 U	490 U	1200 U	470 U
Aroclor-1232	240 U	240 U	250 U	240 U	230 U	230 U	220 U	250 U	580 U	240 U
Aroclor-1242	240 U	240 U	250 U	240 U	230 U	230 U	220 U	250 U	580 U	240 U
Aroclor-1248	240 U	240 U	250 U	240 U	230 U	230 U	220 U	250 U	580 U	240 U
Aroclor-1254	340	890	.720	1500	600	1100	990	1000	2800	650
Aroclor-1260	240 U	240 U	250 U	240 U	230 U	560	180 J	250 U	440 J	130 J
Total PCB (mg/Kg)	0.34	0.89	0.72	1.50	0.60	1.66	1.17 J	1.00	3.24 J	0.78 J

U - Non-detected compound.

B - Compound detected in the associated Method Blank.

J - Estimated value.

JN - Presumptive evidence of a compound at an estimated value.

R - Rejected compound.

PROJECT: Cornell-Dubilier

SDG# 4337

SOIL: Low Concentration

Sample #/Concentration (ug/Kg)

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Sample Date	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98
Sample ID	CDFF011	CDFF012	CDFF013	CDFF014	CDFF015	CDFF016	CDFF017	CDFF018	CDFFO19	CDFF020
Lab ID	18915	18916	18917	18918	18919	18920	18921	18922	18923	18924
% Moisture	15%	16%	14%	14%	21%	15%	14%	13%	14%	15%
Dilution Factor	10	20	10	20	10	10	20	10	10	10
Aroclor-1016	240 U	480 U	230 U	460 U	250 U	240 U	460 U	230 U	230 U	230 U
Aroclor-1221	470 U	950 U	460 U	930 U	510 U	470 U	920 U	460 U	460 U	460 U
Aroclor-1232	240 U	480 U	230 U	460 U	250 U	240 U	460 U	230 U	230 U	- 230 U
Araclor-1242	240 U	480 U	230 Ú	460 U	250 U	240 U	460 U	230 U	230 U	230 U
Aroclor-1248	240 U	480 U	230 U	460 U	250 U	240 U	460 U	230 U	230 U	230 U
Aroclor-1254	790	3900	1100	6000	1600	920	2100	560	720	340
Aroclor-1260	260	260 J	230	240 J	240 J	200 J	380 J	140 J	260	140 J
Total PCB (mg/kg)	1.05	4:16 J	1.33	6.24 J	1.84 J	1.12 J	2.48 J	6.7J	0.98	0.48 J

U - Non-detected compound.

B - Compound detected in the associated Method Blank.

J - Estimated value.

JN - Presumptive evidence of a compound at an estimated value.

R - Rejected compound.

PROJECT: Cornell-Dubilier

SDG# 4337

SOIL: Low Concentration

Sample #/Concentration (ug/Kg)

Sample Date	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98
Sample ID	CDFF021	CDFF022	CDFF023	CDFF024	CDFF025	CDFF026	CDFF027	CDFF028	CDFF029	CDFF030
Lab ID	18925	18926	18927	18928	18929	18930	18931	18932	18933	18934
% Moisture	19%	23%	12%	16%	12%	12%	11%	14%	15%	16%
Dilution Factor	10	10	10	10	10	10	10	10	10	10
Araclor-1016	250 U	260 U	230 U	240 U	230 U	230 U	220 U	230 U	240 U	240 U
Araclor-1221	490 U	520 U	450 U	480 U	450 U	450 U	450 U	460 U	470 U	480 U
Aroclor-1232	250 U	260 U	230 U	240 U	230 U	230 U	220 U	230 U	240 U	240 U
Aroclor-1242	250 U	260 U	230 U	240 U	230 U	230 U	220 U	230 U	240 U	240 U
Aroclor-1248	250 U	260 U	230 U	240 U	230 U	230 U	220 U	230 U	240 U	240 U
Aroclor-1254	890	350	350	830	560	730	1000	670	610	550
Aroclor-1260	220 J	140 J	110 J	160 J	130 J	210 J	240	150 J	140 J	120 J
Total PCB (mg/kg)	1.113	0.49 J	0.46 J	0,99 J	0.69 J	0.94 J	1.24	0.82 J	0.75 J	0.67 J

U - Non-detected compound.

B - Compound detected in the associated Method Blank.

J - Estimated value.

JN - Presumptive evidence of a compound at an estimated value.

R - Rejected compound.

PROJECT: Cornell-Dubilier

SDG# 4337

SOIL: Low Concentration

Sample #/Concentration (ug/Kg)

Sample Mconcen	aanon tagi	1.9/		 		 	
Sample Date	11/14/98	11/14/98	11/14/98				
Sample ID	CDFF031	CDFF032	CDFF033				
Lab ID	18935	18936	18937				
% Moisture	18%	17%	15%				
Dilution Factor	10	10	10				
Araclor-1016	240 U	240 U	240 U	Ţ			
Araclor-1221	490 U	480 U	470 U				
Aroclor-1232	240 U	240 U	240 U		·		
Aroclor-1242	240 U	240 U	240 U				
Aroclor-1248	240 U	240 U	240 U			:	
Aroclor-1254	360	310	870				
Aroclor-1260	110 J	66 J	270				
Total PCB (mg/kg)	0.47 J	0.376 J	1.14				

- U Non-detected compound.
- B Compound detected in the associated Method Blank.
- J Estimated value.
- JN Presumptive evidence of a compound at an estimated value.
- R Rejected compound.

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Person Assuming Responsibility for Sample:

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CHAIN OF CUSTODY RECORD Strate Control
1. Surface Water 1. HCl 2. Ground Water 2. HN03 3. Leachas 3. Na2504 4. Rings 4. H2504 5. Soil/Sodiment 5. Other (Specify) FPA CONTRACT 62-W5-0019 Frace: SOR-725-7007 FROM FILE SOR-72
2. Ground Water 2. HN03 3. Loschete 3. Nelson 4. Ringers 5. Soil/Sodiment 5. Other (Specify) FA CONTRACT 61-WS-0019 FACE SOIL-Soil 6 Fix 508-725-7007 ROY F. Western Inc., USEPA Region II START Strite 201, 1090 King Georges Fost Road, Edition, New Jersey 08837-3705 Alternitim: Simila Suminary, START Analytical Conditionary MM/DD/YY/Time Manix Low-L Type Proserv. VOA BRA PENTINCES TAXON Resp. 128 (REAC) OTHER COMPT COMPT MAN DESCRIPTION COMPT C
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FA CONTRACT 61-WS-0019 FORCE 905-725-4116 Fax 905-725-707 FORCE 905-725-4116 Fax 905-725-707 ROY F. Western Inc., USEPA Region II START Strite 201, 1090 King Georges Fost Road, Edison, Many Jersey 08837-5705 Attention: Smits Sumbally, START Analytical Coordinator Table Number Sample Collection Sample Samp
Proce: 905-735-5116 Far 905-735-7377 7. Wasse N. Not Processed 8. Other (Specify) See Comments Verical and written results to: Roy F. Western Inc., USEPA Region II START Strite 201, 1090 King Georges Post Road, Edison, New Jersey 08837-3703 Attention: Smith Sumbally, START Analytical Confidentary male Number Sample Collection MM/DD/YY/Time Manix Low-L Type Process. WOA BMA PENTINGS TABLES (CHEEK MM/DD/YY/Time Manix Low-L Type Process. WOA BMA PENTINGS TABLES (CHEEK Mac M Engl- R Orak-O Box A)
Verical and written results to: Roy F. Western Inc., USEPA Region II START Strite 201, 1090 King Georges Post Road, Edison, New Jersey 08837-5703 Attention: Smits Sumbally, START Analytical Conditionary male Number Sample Collection Sensite Conc. Sensite
Verial and written results to: Roy F. Western Inc., USEPA Region II START Strite 201, 1090 King Georges Post Road, Editor, May Jersey 08837-5703 Attention: Smits Sumbally, START Analytical Conditionary ple Number Sample Collection Sample
Strite 201, 1090 King Georges Post Road, Edison, New Jersey 08857-5705 Attention: Simila Suminally, START Analytical Conditionary ple Number: Sample Collection Sample S
Allention: Smitz Sumirally, START Analytical Conditions make Number Sample Collection Sample Sa
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Roy F. Weston, Inc.

Sample Number

Sample Number

FEDERAL PROGRAMS DIVISION

Reimquished By:

Rainamined By:

La Association with Resource Applications, Inc., R.E. Services Associates, PRC Environmental Management, C.C. Johnson & Malhora, P.C., and GRB Environmental Services, Inc.

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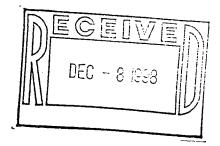
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Job number: 9802.916 Roy F. Weston





PCBs

The column for this analysis was 30 m long with 0.53 mm diameter RTX-35.

The reporting limits were raised according to the percent solids present in the soil samples. Aroclor 1254 was found in the soil samples. No PCBs were detected in the water sample.

QC samples associated with the water sample met method criteria.

Soil samples were analyzed at secondary dilutions and their quantitation limits were raised accordingly. In samples CDFF009, CDFF012, CDFF014 and CDFF017 the surrogates were diluted out.

Some samples had elevated surrogate (DCB) recoveries due to co-elution with non-target matrix interference.

CDFF001 MSD Aroclor 1260 spike recovery was outside QC Limits due to Aroclor 1254 native to sample and non-target matrix interference. Laboratory control sample (LCS) 1311-42-2 and method blank met QC criteria.

CDFF011 MS/MSD Aroclor 1260 spike recovery was outside QC Limits due to Aroclor 1254 native to sample and non-target matrix interference. Laboratory control sample (LCS) 1311-44-2 and method blank met QC criteria.

Gary Rudz, Senior Chemist



ecology and environment, inc.

International Specialists in the Environment

ANALYTICAL SERVICES CENTER 4493 Walden Avenue Lancaster, New York 14086 Tel. (716) 685-8080, Fax: (716) 685-0852

January 11, 1999

Mr. David Rosenberg Roy F. Weston – Edison 1090 King Georges Post Road Suite 201 Edison, NJ 08837

RE: 9802.916 resubmittal

Dear Mr. Rosenber:

Attached is a submitted laboratory report of the analyses conducted on twenty-seven samples received at the Analytical Services Center on November 16, 1998. The samples were analyzed according to methods set forth in the "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, Update III, June 1997, USEPA.

At your request the data for this package was requantitated for presence of PCB aroclor-1260. The pattern was masked by the presence of larger amounts of PCB aroclor -1254 so quantitation is difficult. Only a small portion of the PCB-1260 pattern was available for requantitation. Please keep this in mind in using the requantitation data.

A facsimile of these results was sent to Mike Mankoff on January 5, 1999.

Very truly yours,

Tony Bogolin - Project Manager

Tony Bogelin/C.M.

Analytical Services Center

TB/cam Enclosure

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. 4, Analytical Services Center

CLIENT : ROY F. WESTON := EDISON

%SOLIDS : 83 %

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18905

MATRIX : SOLID

SAM	Ρ.	L	E

SAMPLE ID CLIENT: CDFF001

SWILDE	ıυ	CDIEMI:	CDE	FUU.

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		240
PCB-1254	340		240
PCB-1221	ND		480
PCB-1232	ND		240
PCB-1248	ND		240
PCB-1260	ND	•	240
PCB-1016	ND		240

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. // Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT
TEST NAME : 8082 PCB
SAMPLE ID LAB : EE-98-18906 RESULTS IN DRY WEIGHT

%SOLIDS : 82 %

SAMPLE ID CLIENT: CDEE002

UNITS : UG/KG
MATRIX : SOLID

SMILLIE	TD	CTITEMI:	CDFF002

PARAMETER	RESULTS	Q	QNT. LIMIT
PCB-1242	ND		240
PCB-1254	890		240
PCB-1221	ND		490
PCB-1232	ND		240
PCB-1248	ND		240
PCB-1260	ND		240
PCB-1016	ND		240

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. 🚓 Analytical Services Center

CLIENT

: ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB %SOLIDS : 81 %

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18907

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF003

PARAMETER	RESULTS	Q QNT. LIMIT
PCB-1242	ND	250
PCB-1254	720	250
PCB-1221	ND	490
PCB-1232	ND	250
PCB-1248	ND	250
PCB-1260	ND	250
PCB-1016	ND	250

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916 ELAP ID : 10486

Ecology and Environment, Inc. Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB

%SOLIDS : 82 UNITS : UG/KG

SAMPLE ID LAB : EE-98-18908

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF004

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		240
PCB-1254	1500		240
PCB-1221	ND .		490
PCB-1232	ND		. 240
PCB-1248	ND		240
PCB-1260	ND		240
PCB-1016	ND ·		240

QUALIFIERS: C = COMMENT ND = NOT DETECTED

MJ = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. μ Analytical Services Center

: ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT
TEST NAME : 8082 PCB TEST NAME : 8082 PCB

%SOLIDS : 86

SAMPLE ID LAB : EE-98-18909

UNITS : UG/KG MATRIX : SOLID

SAMPLE ID CLIENT: CDFF005

PARAMETER	RESULTS	Q QNT. LIMIT
PCB-1242	ND	230
PCB-1254	600	230
PCB-1221	ND	460
PCB-1232	ND	230
PCB-1248	ND	230
PCB-1260	ND	230
PCB-1016	ND	230

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. $\dot{\mathcal{H}}$ Analytical Services Center

CLIENT

: ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT

%SOLIDS : 87

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18910

SAMPLE ID CLIENT: CDFF006

MATRIX : SOLID

a am yapesan

PARAMETER	RESULTS	Q	QNT. LIMIT.
		-	
PCB-1242	ND	.	230
PCB-1254	1100		230
PCB-1221	ND		460
PCB-1232	ND .	•	230
PCB-1248	ND		230
PCB-1260	560		230
PCB-1016	ND		230

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. γ Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT

%SOLIDS : 90

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18911

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF007

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		220
PCB-1254	990		220
PCB-1221	ND		440
PCB-1232	ND		220
PCB-1248	ND		220
PCB-1260	180	J	220
PCB-1016	ND		220

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. θ^{γ} Analytical Services Center

CLIENT

: ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB

%SOLIDS : 81 UNITS : UG/KG

SAMPLE ID LAB : EE-98-18912

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF008

PAR	RAMETER	RESULTS	Q	QNT. LIMIT
			-	
PCB	3-1242	ND		250
PCB	3-1254	1000		250
PCB	3-1221	ND		490
PCB	3-1232	ND		250
PCB	3-1248	ND		250
PCB	3-1260	ND .		250
PCE	3-1016	ND		250

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. \hat{j} Analytical Services Center

CLIENT : ROY F. WESTON - EDISON RESULTS IN DRY WEIGHT

%SOLIDS : 69 %

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18913

SAMPLE ID CLIENT: CDFF009

MATRIX : SOLID

PARAMETER	
DOD 1242	

PCB-1242
PCB-1254
PCB-1221
PCB-1232
PCB-1248
PCB-1260

RESULTS Q QNT. LIMIT 580 ND 2800 580 ND 1200 ND 580 ND 580 440 580 ND 580

PCB-1016

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. Analytical Services Center

%SOLIDS : 85 %

CLIENT : ROY F. WESTON - EDISON RESULTS IN DRY WEIGHT TEST NAME TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18914

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF010

PARAMETER RESULTS Q	QNT. LIMIT
PCB-1242 ND	240
PCB-1254 650	240
PCB-1221 ND	470
PCB-1232 ND	240
PCB-1248 ND	240
PCB-1260 130 J	240
PCB-1016 ND	240

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. , Analytical Services Center

: ROY F. WESTON -- EDISON

RESULTS IN DRY WEIGHT

%SOLIDS : 85 **%**

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18915

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF011

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		240
PCB-1254	790		240
PCB-1221	ND		470
PCB-1232	ND		240
PCB-1248	ND		240
PCB-1260	260		240
PCB-1016	ND		240
•			and the second s

TEST CODE :SPCB0A1 JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. \hat{y} Analytical Services Center

: ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT %SOLIDS: 84 UNITS : UG/KG MATRIX : SOLID TEST NAME : 8082 PCB SAMPLE ID LAB : EE-98-18916

SAMPLE ID CLIENT: CDFF012

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		480
PCB-1254	3900		480
PCB-1221	ND		950
PCB-1232	ND		480
PCB-1248	ND		480
PCB-1260	260	J	480
PCB-1016	ND		480

JOB NUMBER: 9802.916

ELAP ID : 10486

Ecology and Environment, Inc. $\tilde{\gamma}$ Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB %SOLIDS : 86 %

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18917

MATRIX : SOLID

SAMPLE	TD	CLIENT:	CDFF	013

PARAMETER	RESULTS	Q.	QNT. LIMIT
		-	
PCB-1242	ND		230
PCB-1254	1100		230
PCB-1221	ND		460
PCB-1232	ND		230
PCB-1248	ND		230
PCB-1260	230		230
PCB-1016	ND		230

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER: 9802.916

ELAP ID : 10486

Ecology and Environment, Inc. , Analytical Services Center

CLIENT

: ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB

%SOLIDS : 86 % UNITS : UG/KG

SAMPLE ID LAB : EE-98-18918

SAMPLE ID CLIENT: CDFF014

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		460
PCB-1254	6000		460
PCB-1221	ND		930
PCB-1232	ND		460
PCB-1248	ND		460
PCB-1260	240	J	460
PCB-1016	ND		460

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. \hat{q} Analytical Services Center

CLIENT : ROY F. WESTON - EDISON RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB

%SOLIDS : 79 **%** UNITS : UG/KG

SAMPLE ID LAB : EE-98-18919

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF015

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		250
PCB-1254	1600		250
PCB-1221	ND		510
PCB-1232	ND		250
PCB-1248	ND	•	250
PCB-1260	240	J	250
PCB-1016	ND		250

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. 47 Analytical Services Center

CLIENT

: ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB %SOLIDS : 85 % UNITS : UG/KG

SAMPLE ID LAB : EE-98-18920

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF016

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		240
PCB-1254	920		240
PCB-1221	ND		470
PCB-1232	ND		240
PCB-1248	ND		240
PCB-1260	200	J	240
PCB-1016	ND	,	240

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. Analytical Services Center

: ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB

PARAMETER

PCB-1242 PCB-1254

PCB-1221

PCB-1232

PCB-1248

PCB-1260

PCB-1016

%SOLIDS : 87 %

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18921

460

MATRIX : SOLID

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SAMPLE ID CLIENT: CDFF017

ND

RESULTS QNT. LIMIT ND 460 2100 460 ND 920 ND 460 460 ND 380 J 460

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. ρ^* Analytical Services Center

CLIENT

: ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB **%**SOLIDS : 87 %

UNITS : UG/KG MATRIX : SOLID

SAMPLE ID LAB : EE-98-18922

SAMPLE ID CLIENT: CDFF018

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	,
PCB-1242	ND		230
PCB-1254	560		230
PCB-1221	ND		460
PCB-1232	ND		230
PCB-1248	ND		230
PCB-1260	140	J	230
PCB-1016	ND		230

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. ,; Analytical Services Center

: ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT

TEST NAME : 8082 PCB

%SOLIDS : 86 %

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18923

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF019

RESULTS	Q	QNT. LIMIT
	-	
ND		230
720		230
.ND		460
ND		230
ND		230
260		230
ND		230
	ND 720 ND ND ND ND ND 260 ND	ND 720 ND ND ND ND 260 ND

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB

%SOLIDS : 87 % UNITS : UG/KG

SAMPLE ID LAB : EE-98-18924

SAMPLE ID CLIENT: CDFF020

MATRIX : SOLID

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PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		230
PCB-1254	340		230
PCB-1221	ND		460
PCB-1232	ND	-	230 · ·
PCB-1248	ND		230
PCB-1260	140	J	230
PCB-1016	ND		230

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB

%SOLIDS : 81 % UNITS : UG/KG

SAMPLE ID LAB : EE-98-18925

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF021

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		250
PCB-1254	890		250
PCB-1221	ND		490
PCB-1232	ND ·		250
PCB-1248	ND		250
PCB-1260	. 220	J	250
PCB-1016	ND		250

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. $\hat{\mu}$ Analytical Services Center

CLIENT

: ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT

TEST NAME : 8082 PCB

%SOLIDS : 77 % UNITS : UG/KG

SAMPLE ID LAB : EE-98-18926

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF022

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		260
PCB-1254	350		260
PCB-1221	ND		520
PCB-1232	ND		260
PCB-1248	ND		260
PCB-1260	140	J	260
PCB-1016	ND		260

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. , Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB UNITS : UG/KG SAMPLE ID LAB : EE-98-18927 MATRIX : SOLID

%SOLIDS : 88 %

SAMPLE ID CLIENT: CDFF023

PARAMETER	RESULTS	Q	QNT. LIMIT
		_	
PCB-1242	ND		230
PCB-1254	350		230
PCB-1221	ND		450
PCB-1232	ND		230
PCB-1248	ND		230
PCB-1260	110	J	230
PCB-1016	ND		230

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. Analytical Services Center

CLIENT : ROY F. WESTON - EDISON RESULTS IN DRY WEIGHT

TEST NAME : 8082 PCB

%SOLIDS : 84 %

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18928

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF024

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		240
PCB-1254	830		240
PCB-1221	ND		480
PCB-1232	ND		240
PCB-1248	ND		240
PCB-1260	160	J	240
PCB-1016	ND .		240

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. $_{i}$ Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT

%SOLIDS : 88

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18929

MATRIX : SOLID

SAMPLE	ID	CLIENT:	CDFF025

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		230
PCB-1254	560		230
PCB-1221	ND		450
PCB-1232	ND		230
PCB-1248	ND		230
PCB-1260	130	J	230
PCB-1016	ND		230

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. ,7 Analytical Services Center

CLIENT

: ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB SAMPLE ID LAB : EE-98-18930

%SOLIDS : 88 UNITS : UG/KG MATRIX : SOLID

SAMPLE ID CLIENT: CDFF026

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		230
PCB-1254	730		230
PCB-1221	ND		450
PCB-1232	ND ·		230
PCB-1248	ND		230
PCB-1260	210	J	230
PCB-1016	ND		230

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. f_{ij} Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB

%SOLIDS : 89 % UNITS : UG/KG

SAMPLE ID LAB : EE-98-18931

MATRIX : SOLID

SAMPLE	ID	CLIENT:	CDFF027

RESULTS	Q	QNT. LIMIT
	-	
ND		220
1000		220
ND		450
ND		220
ND		220
240		220
ND		220
	ND 1000 ND ND ND ND	ND 1000 ND ND ND ND 240

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : ROY F. WESTON - EDISON RESULTS IN DRY WESTON

RESULTS IN DRY WEIGHT

%SOLIDS : 86 %

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18932

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF028

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		230
PCB-1254	670		230
PCB-1221	ND		460
PCB-1232	ND		230
PCB-1248	ND		230
PCB-1260	150	J	230
PCB-1016	ND		230

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. ρ Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT

%SOLIDS : 85 %

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18933

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF029

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		240
PCB-1254	610		240
PCB-1221	ND		470
PCB-1232	ND		240
PCB-1248	ND		240
PCB-1260	140	J	240
PCB-1016	ND		240

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT TEST NAME : 8082 PCB

%SOLIDS : 84 %

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18934

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF030

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		240
PCB-1254	550		240
PCB-1221	ND		480
PCB-1232	ND		240
PCB-1248	ND		240
PCB-1260	120	J	240
PCB-1016	ND		240
	•		

QUALIFIERS: C = COMMENT ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : ROY F. WESTON - EDISON RESULTS IN DRY WEIGHT

%SOLIDS : 82

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18935

SAMPLE ID CLIENT: CDFF031

MATRIX : SOLID

סשתשאממגם	

PARAMETER	RESULTS	Q	OMI. LIMIT
		-	
PCB-1242	ND		240
PCB-1254	360		240
PCB-1221	ND		490
PCB-1232	ND		240
PCB-1248	ND		240
PCB-1260	110	J	240
PCB-1016	ND		240

QUALIFIERS: C = COMMENT

J = ESTIMATED VALUE

ND = NOT DETECTED B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. γ^{γ} Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT

%SOLIDS : 83

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-18936

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF032

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		240
PCB-1254	310		240
PCB-1221	ND		480
PCB-1232	ND		240
PCB-1248	ND		240
PCB-1260	66	J	240
PCB-1016	ND		240

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

JOB NUMBER :9802.916

ELAP ID : 10486

Ecology and Environment, Inc. Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT

%SOLIDS : 85 %

TEST NAME : 8082 PCB

UNITS: : UG/KG

SAMPLE ID LAB : EE-98-18937

MATRIX : SOLID

SAMPLE ID CLIENT: CDFF033

PARAMETER	RESULTS	Q	QNT. LIMIT
		-	
PCB-1242	ND		240
PCB-1254	870		240
PCB-1221	ND		470
PCB-1232	ND		240
PCB-1248	ND		240
PCB-1260	270		240
PCB-1016	ND		240

QUALIFIERS: C = COMMENT ND = NOT DETECTED J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK